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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/465,038	12/16/1999	RONALD THOMAS KEEN	RCA89605	8392

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EXAMINER

YENKE, BRIAN P

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 08/04/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/465,038

Applicant(s)

KEEN, RONALD THOMAS

Examiner

BRIAN P. YENKE

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,25 and 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,25 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's arguments filed 27 June 2003 have been fully considered but they are not persuasive.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 25-26 rejected under 35 U.S.C. 103(a) as being unpatentable over Martinez, US 5,812,184.

In considering claim 1,

- a) *the claimed determining if said artifact...* Martinez discloses a system which places additional data over a video signal, where the video/data signal can be processed and eliminating any effects from the data signal on the video presented. Martinez discloses a receiver 49 (Fig 7) of TRM 22 (Fig 5) where the selected frequency signal is sent to compressed video detector 50 and uncompressed to NTSC block 52 (Fig 7
- b) *the claimed calculating a value for the frequency of said periodic signal...).* To properly cancel the effect of the additional data or any alien signal superimposed upon

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the waveform pedestal, the rate of the additional data must equal an odd harmonic of one-half the standard TV horizontal scan rate (col 9, line 28-48 and col 13, line 42-55) to visually cancel, and thus eliminate the artifact.

d) *the claimed setting said frequency of said periodic signal* is met by Martinez which discloses that any signal (in addition to video signal) that resides on the periodic video pedestal of 15,734 Hz which is intended to visually cancel must possess a fundamental frequency which an odd multiple of one-half the television horizontal (H-scan) frequency. An example given is the NTSC chrom-subcarrier of 3.579545 MHz is an odd multiple of one-half the horizontal scan rate, a multiple equal to 455. Thus any known frequency signal that is effecting the video passband of the video signal, as in the NTSC standard, can be eliminated/reduced. The component frequencies of the luminance signal are concentrated near a horizontal scanning frequency f_h and the higher harmonics nf_h , whereas the component frequencies of the chrominance signal are concentrated in odd harmonics of $\frac{1}{2} f_h$, thus $(n + \frac{1}{2}) f_h$.

However, Martinez does not specifically disclose rounding (c) *the claimed rounding the calculated value*. Martinez discloses the elimination of the data-over or alien signal imposed on a video signal by eliminating the odd harmonic of $\frac{1}{2}$ the horizontal frequency. The horizontal scan frequency of the NTSC video signal is 15,734.26573 Hz, thus by selecting a $n(1/2)f_h$ (^{2.5x} $2 \times 1.5 \times 15,734.26573$) of the horizontal frequency multiplied by the horizontal scan frequency results in a number of approximately 39.336 KHz. Therefore it would have been obvious to one of ordinary

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skill in the art at the time of the invention to modify the 39.336 KHz value, by rounding up or down the calculated value, based on the precision of the designer/system, where 15,734.26573 in precision will compute a 39.336 KHz signal which can thus be rounded down to the 39 KHz signal, and where 15,734.26573 is used as (16) rounded up, the computed frequency will be 40 KHz, thus the designer can round up or down.

In considering claims 25-26,

Martinez discloses the elimination of the data-over or alien signal imposed on a video signal by eliminating the odd harmonic of $\frac{1}{2}$ the horizontal frequency. The horizontal scan frequency of the NTSC video signal is 15,734.26573 Hz, thus by selecting a $n(1/2)f_h$ ($2 \times 15 \times 15,734.26573$) of the horizontal frequency multiplied by the horizontal scan frequency results in a number of approximately 39.336 KHz. It would be obvious to one of ordinary skill that the approximate number 39.336 KHz, could be rounded up or down based on the precision of the designer/system, where 15,734.26573 in precision will compute a 39.336 KHz signal which can thus be rounded down to the 39 KHz signal (claim 25), and where 15,734.26573 is used as (16) rounded up, the computed frequency will be 40 KHz (claim 26), thus the designer can round up or down.

Applicant's Argument's

a) Regarding claims 1 and 25-26 applicant states that a person skilled in the art would not round the calculated value of said periodic signal to an integer number of

kHz. Applicant states that Martinez, which discloses any signal intended to visually cancel by alternating it's polarity must possess a fundamental frequency which is an odd multiple of one-half the television scan frequency. The fundamental frequency, therefore, must be as accurate as possible so that complete cancellation can be achieved.

Examiner's Response

b) The examiner disagrees. Martinez does disclose that any signal intended to visually cancel by alternating it's polarity must possess a fundamental frequency which is an odd multiple of one-half the television scan frequency. The applicant then states the fundamental frequency therefore, must be as accurate as possible so that complete cancellation can be achieved.

However, it is also noted that applicant's own disclosure states (page 2, line 12-18), "Rather than undertake the extensive and expensive redesign of the integrated circuit to eliminate the artifact, since the frequency of the interfering signal was selectable, it was decided to select the frequency of the interfering signal so that the frequency would be an odd harmonic of one half the horizontal line scan frequency. By making the particular selection of frequency to be an odd harmonic of one half of the horizontal line scan frequency, adjacent scan lines of the artifact are 180 degrees out of phase with each other." The applicant's own disclosure also states (page 3, line 23-26) that the interfering modulation signal...was 39.336 kHz ($2.5 \times f_h$) which can be rounded up or down to the nearest integral kHz of 39 kHz or 40 kHz.

Thus, the applicant's own disclosure and arguments, states that Martinez performs all the limitations of the claimed invention, except rounding, since as the applicant states that complete cancellation cannot be achieved if rounded since the fundamental frequency must be as accurate as possible.

It is also noted by the examiner that Martinez discloses visual cancellation and not complete cancellation. Since as the applicant's own disclosure states (page 3, line 29-31) ... the artifact is rendered largely visually canceled when viewed due to the integrating characteristics of the eye of the viewer, even though the artifact is still here.

Thus the only difference between Martinez and the applicant's invention is the rounding (up or down) of the frequency to an integer. Therefore, the difference between Martinez and the applicant's invention of rounding a number is not patentable distinct, as explained above.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US 6,470,048, Fenne discloses a frequency based video data substitution for increased video compression ratios which includes rounding of frequency values,

US 6,233,672, Lynch discloses multiple rounding modes within the floating point units of microprocessors,

US 6,282,243, Kazui et al., discloses an interpolation process that supports two types of rounding algorithms that round up or down each interpolated pixel value to an appropriate integer value.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Yenke whose telephone number is (703) 305-9871. The examiner work schedule is Monday-Thursday, 0730-1830 hrs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, John W. Miller, can be reached at (703)305-4795.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231


or faxed to:

(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703)305-4700.

B.P.Y.

14 July 2003


JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600